Claims

- 1. Biologically pure <u>Serpens spp.</u> strain HBL-112.
- 2. A pharmaceutical composition for preventing and/or treating Papillomatous Digital Dermatitis in ruminants comprising a therapeutically effective amount of <u>Serpens</u> <u>spp.</u> bacteria or <u>Serpens spp.</u> bacterin and/or an immunologically active portion thereof and/or an antigenic epitope cross-reactive with <u>Serpens spp.</u> and a veterinerally acceptable diluent or a carrier.
- 3. The composition of claim 2 wherein said ruminant has symptoms of Papillomatous Digital Dermatitis.
- 4. The composition of dlaim 2 wherein said ruminant has no symptoms of Papillomatous Digital Dermatitis.
- 5. The composition of claim 2 comprising <u>Serpens spp.</u> strain HBL-112 or <u>Serpens spp.</u> strain HBL-112 bacterin.
- 6. The composition of claim 2 comprising <u>Serpens flexibilis</u> or <u>Serpens flexibilis</u> bacterin)
- 7. A method of preventing and/or treating Papillomatous Digital Dermatitis in ruminants comprising administering to the ruminant a therapeutically effective amount of <u>Serpens spp.</u> bacteria or <u>Serpens spp.</u> bacterin and/or an immunologically active portion thereof and/or an antigenic epitope cross-reactive with <u>Serpens spp.</u>
- 8. The method of claim 7 wherein said ruminant has symptoms of Papillomatous Digital Dermatitis.
- 9. The method of claim 7 wherein said ruminant has no symptoms of Papillomatous Digital Dermatitis.
- 10. The method of claim 7 wherein Serpens spp. strain HBL-

I:\DATA\USER\PMW\SHARED\DAPCOL .JDR

- 112 or <u>Serpens spp.</u> strain HBL-112 bacterin is administered to said ruminant.
- 11. The method of claim 7 wherein <u>Serpens flexibilis</u> or <u>Serpens flexibilis</u> bacterin is administered to said ruminant.
- 12. A method for determining the presence of PDD antibodies in a sample of ruminant serum comprising contacting said sample with an antigen selected from the group consisting of bacteria or bacterin of the <u>Serpens</u> genus or an immunologically active portion thereof and/or an antigenic epitope cross-reactive with <u>Serpens spp.</u> and detecting antibodies in said sample which bind to said antigen.
- 13. A method for determining the presence of PDD antibodies in a sample of ruminant serum comprising contacting the sample with a solution containing at least one binding partner capable of binding to the <u>Serpens spp.</u> strain HBL-112 or an immunologically active portion thereof and/or an antigenic epitope cross-reactive with <u>Serpens spp.</u> strain HBL-112, removing unbound binding partner and determining the presence of bound binding partner in the sample.
- 14. A method for determining the presence of anti-Serpens spp. antibodies in a ruminant comprising contacting Serpens spp. antigen with a serum sample from a ruminant, adding an anti-ruminant antibody having an enzyme attached, and adding a substrate with which said enzyme can convert to a readily measured product.
- 15. A method for determining the presence of PDD antigen in a sample of ruminant serum comprising contacting said sample

I:\DATA\USER\PMW\SHARED\D:\P001 .JDR

with an antibody selected from the group comprising the Serpens genus and detecting antigen in said sample which bind to said antibody.

- 16. A diagnostic kit for use in a method according to claim 14 for determination of the presence of PDD antibodies said kit comprising antigen and one or more binding partners.
- 17. The kit of claim 16 wherein reagents for sample preparation and reagents for detection of bound antibody are included.